FRUGIVORY IN THE BLACK MOUNTAIN RAINBOW-SKINK, *CARLIA SCIRTETIS* INGRAM AND COVACEVICH, 1980. *Memoirs of the Queensland Museum 49(2): 700. 2004:-* The Black Mountain Rainbow-skink, *Carlia scirtetis*, is a small-medium sized saxicolous scincid (snout-vent length up to 70mm, mass 4-6g, Goodman, unpubl. data) restricted to the 6km^2 boulder jumble habitat of the Black Trevethan Range, NE Queensland (Ingram & Covacevich, 1980, 1989). Like almost all skinks of this size, *C. scirtetis* is presumed to have a diet composed almost entirely of terrestrial invertebrate prey (Brown, 1983; Ingram & Covacevich, 1980; Greer, 1989), with the possibility of opportunistic taking of aerial invertebrates. Black Mountain is comprised almost entirely of granitic boulders that range in size from 0.5-1200m^3 (most >8m^3) and has a very sparse vegetation. Therefore, I assume that invertebrate prey is likely to be depauperate. Here, I report on the incidence of frugivory by *C. scirtetis* and suggest that figs may act as an important food supplement. Herbivory is usually associated with larger lizards (>100g; King, 1996) and, hence, seems an unlikely dietary option for this species, with a body weight of 4-6g.

While collecting *C. scirtetis* on the northern side of Black Mountain (25-29/11/2000), adult and sub-adult individuals were observed feeding on the ripe fruit of the native fig, *Ficus obliqua* var. *obliqua*, which grows in isolated sites on Black Mountain (Werren & Trenerry, 1990). Ripe fruit were orange-red, compared to green when unripe (Cooper & Cooper, 1994). Due to the relatively small size of this fig, *C. scirtetis* appeared to consume each fruit whole with little chewing. Further, possibly due to the strict saxicolous habits of *C. scirtetis*, individuals were only observed accessing fruit from branches that closely overhung boulders (Ingram & Covacevich, 1980; 1989). No individuals were observed climbing trunk or branches to access fruit. To determine the extent to which the skinks were feeding on fruit, a sample of recently collected male and female sub-adults and adults (N=8) were monitored for scat production. All individuals were maintained individually in captivity in plastic boxes (350 × 130 × 100mm) for up to 5 weeks, prior to release at their site of capture (QPWS Scientific Purposes Permit No. F1/000253/99/SAA). Each individual was checked regularly throughout the day, and all fresh scats were collected and dissected to estimate the proportion of *Ficus* seeds present. An examination of all scats produced within the first 24 hours indicated that during November the scats of *C. scirtetis* consist of approximately 70-80% by volume of *F. obliqua* var. *obliqua* seeds. Examination of scats produced after the first 24 hours and up to three days following capture indicated that *Ficus* seeds were still present within scats of *C. scirtetis*, suggesting that these seeds remain within the digestive tract for a number of days following ingestion.

Like most skinks in northern Australia, members of *Carlia* are 'income' breeders and produce a series of clutches during the wet-season (October – February; Wilhoft & Reiter, 1965; James & Shine, 1985; Clerk and Alford, 1993). Thus, these clutches are likely to be produced directly from recently obtained resources. As a consequence any additional resources that are obtained are also likely to be allocated predominantly to reproduction. The period of fruiting for the fig (November – June; Cooper & Cooper, 1994) encompasses and extends beyond the period of clutch production typical for *Carlia* spp. (November – March) in this region (Wilhoft, 1963; James & Shine, 1988) including *C. scirtetis* (Goodman unpubl. data.). Thus, these additional resources and the extended fruiting season may help to reduce costs of reproduction in *C. scirtetis* (i.e., detriment to body condition) that are likely to be incurred (Shine, 1980; Schwarzkopf, 1993) by reproducing female lizards, particularly in more nutritionally stressful environments (Schwarzkopf, 1994). Therefore, diet supplementation may enable *C. scirtetis* to make a greater reproductive investment than if limited solely to invertebrate prey, and may also facilitate a more rapid recovery from reproduction.

The high proportion of fig seeds in *C. scirtetis* scats suggests that it consumes figs in substantial proportions and may act as a disperser of fig seeds on Black Mountain. Other vectors for seed dispersal on Black Mountain are birds and bats (Herrera, 1984; Howe & Smallwood, 1982). Research on fruit ingestion by *Hoplodactylus maculatus*, a gecko of similar size (SVL to 75mm; Whitaker, 1982) indicates that a high proportion of ingested fruit germinate successfully (72%). Further, geckos typically deposited seeds in microhabitats suitable for successful germination (Wotton, 2002). Thus, *C. scirtetis* may be significant in dispersal and establishment of *F. obliqua* var. *obliqua* as the dominant tree species of the Black Mountain boulder jumbles.

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